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TAYLOR M. OKONEK

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Department of Mathematics, Statistics, & Computer Science, Macalester College,
1600 Grand Avenue, Saint Paul, MN 55105

EDUCATION

University of Washington, Seattle, WA

September 2018 - August 2023

Ph.D., Biostatistics

Advisor: Jon Wakefield, Ph.D.

Dissertation: Statistical Methods for Official Statistics and Mortality Estimation

Saint Olaf College, Northfield, MN

September 2014 - May 2018

B.A., Mathematics and Religion

Concentration in Statistics

Summa cum laude

WORK EXPERIENCE

Assistant Professor

August 2023 - Present

Macalester College, Department of Mathematics, Statistics, & Computer Science

Research Assistant

University of Washington, Department of Biostatistics

Supervisor: Jon Wakefield, Ph.D.

June 2019 - August 2023

University of Washington, Department of Environmental and Occupational Health Sciences

Supervisors: Lianne Sheppard, Ph.D. and Joel Kaufman, Ph.D.

September 2018 - June 2019

Saint Olaf College Center for Interdisciplinary Research

Statistical Consultant

Supervisors: Louis Epstein, Ph.D. and Sharon Lane-Getaz, Ph.D.

September 2016 - May 2018

Matthew Wright, Ph.D. and Matthew Richey, Ph.D.

Saint Olaf College Collaborative Undergraduate Research and Inquiry Program

Student Summer Researcher

Supervisors: Sharon Lane-Getaz, Ph.D.

May 2016 - August 2016

TEACHING EXPERIENCE

Instructor

Macalester College, Department of Mathematics, Statistics, & Computer Science

- STAT 155: Introduction to Statistical Modeling (2 sections)

2023

University of Washington, Department of Biostatistics

- BIOS 311: Regression Methods in the Health Sciences

March 2022 - June 2022

Co-taught with Charlie Wolock

Teaching Assistant

University of Washington, Department of Biostatistics

- BIOST 310: Biostatistics for the Health Sciences *September 2020 - December 2020*
- Summer Institute in Statistics and Modeling in Infectious Diseases *July 2021, July 2022*
Spatial Statistics in Epidemiology and Public Health
- Course preparation: Maintenance of R package `rigr` *June 2021 - September 2021*
- BIOST 555: Statistical Methods for Spatial Epidemiology *January 2022 - March 2022*
- BIOST 537: Survival Data Analysis in Epidemiology *January 2023 - March 2023*

Saint Olaf College, Department of Mathematics and Statistics

February 2015 - May 2018

- STAT 212: Statistics for the Sciences
- STAT 322: Statistical Theory
- MATH 244: Real Analysis
- MATH 262: Probability Theory

Advising / Mentorship

University of Washington, Department of Statistics

January 2021 - June 2021

- Directed Reading Program Mentor: Topics in Biostatistics
- Directed Reading Program Mentor: Disease Mapping

Fred Hutchinson Cancer Research Center

June 2021 - September 2021

- Summer Internship Mentor

INDUSTRY EXPERIENCE

Data Science Intern

WindLogics, St. Paul, MN

May 2017 - August 2017

AWARDS AND HONORS

University of Washington

ARCS Foundation Fellow

Biostatistics, Epidemiologic, and Bioinformatic Training in Environmental Health Training Grant

Department of Biostatistics Exceptional Service Award

Saint Olaf College

Phi Beta Kappa Honors Society

Blue Key Honor Society

Pi Mu Epsilon Honor Society

Theta Alpha Kappa Honor Society

Bellows Scholarship

President's Scholarship

PROFESSIONAL SERVICE

Manuscript Reviewer

Journal of Official Statistics

Journal of Survey Statistics and Methodology

UNIVERSITY SERVICE

Macalester College

Member - MSCS Transformation Committee

September 2023 - Present

University of Washington, Department of Biostatistics

Member - Biostatistics Equity, Diversity, and Inclusion Committee *September 2018 - September 2021*

Member - Statistics Education Reading Group *September 2019 - Present*

Member - Biostatistics Activities and Events Squad *September 2019 - September 2022*

Member - Admissions Committee *September 2021 - April 2022*

Member - Teaching Faculty Search Committee *September 2021 - March 2022*

Saint Olaf College

Member - TRIO McNair Scholars Program

January 2016 - May 2018

PUBLICATIONS

PUBLISHED

5. Chen, Y.T., . . . , **Okonek, T.M.**, . . . , Willis, A.D. (2022). rigr: Regression, Inference, and General Data Analysis Tools in R. *The Journal of Open Source Software*, 80, 7.
4. Eaton, J., . . . , **Okonek, T.M.**, . . . , Shiraishi, R.W. (2021). Naomi: A New Modelling Tool for Estimating HIV Epidemic Indicators at the District Level in Sub-Saharan Africa. *Journal of the International AIDS Society*, 24.
3. Wakefield, J., **Okonek, T.M.**, Pedersen, J. (2020). Small Area Estimation for Disease Prevalence Mapping. *International Statistical Review*, 88, 2.
2. Han, S.M., **Okonek, T.M.**, Yadav, N., Zheng, X. (2020). Distributions of Matching Distances in Topological Data Analysis. *SIAM Undergraduate Research Online*, 13.
1. Epstein, L.K., **Okonek, T.M.**, Perkins, A.E. (2019). Mind the Gap: Inclusive Pedagogies for Diverse Classrooms. *Journal of Music History Pedagogy*, 9, 2.

SUBMITTED

2. **Okonek, T.M.**, Wilson, K., Wakefield, J. (2023). A Pseudo-likelihood Approach to Under-5 Mortality Estimation.
1. **Okonek, T.M.**, Wakefield, J. (2022). A Computationally Efficient Approach to Fully Bayesian Benchmarking.

SOFTWARE

pssst	Parametric Survey-weighted Survival models for Synthetic children across Time
rigr	Regression, inference, and general data analysis tools for R
stbench	Fully Bayesian Benchmarking for spatio-temporal models
SUMMER	SAE Unit/area Models and Methods for Estimation in R

RESEARCH PRESENTATIONS

1. “A Computationally Efficient Approach to Fully Bayesian Benchmarking.” WNAR, Virtual. June, 2022. { *Contributed Presentation* }
2. “A Computationally Efficient Approach to Fully Bayesian Benchmarking.” Biostatistics Student Seminar Series, UW Department of Biostatistics, Seattle, WA. November, 2021. { *Contributed Presentation* }
3. “Assessing National PM10 Predictions: From 1990 to 2016.” BEBTEH Student Research Day, UW, Seattle, WA. April, 2019. { *Poster Session* }
4. “Distributions of Matching Distances in Topological Data Analysis.” Underrepresented Students in Topology and Algebra Research Symposium, Portland, OR. April, 2018. { *Poster Session* }
5. “The Music History Game: Assessing Learning through Play.” National Conferences on Undergraduate Research, Memphis, TN. April, 2017. { *Poster Session* }
6. “Teacher Professional Learning Communities and Student Achievement.” Saint Olaf College Collaborative Undergraduate Research and Inquiry Program, Northfield, MN. August, 2016. { *Poster Session* }

PROFESSIONAL AFFILIATIONS

American Statistical Association

TECHNICAL SKILLS

Programming Languages and Statistical Packages

R, c++, Python, Mathematica,
Shiny, Tidyverse

Other Applications

L^AT_EX, Linux/Unix, Git